# DAD 220 Cardinality and Targeted Data Template

Replace the bracketed text in this template with your screenshots and responses. Then submit it to the Module Four Lab for submission, grading, and feedback. Screenshots should be sized to approximately one quarter of a page. Written responses should be in complete sentences. Rename this document by adding your last name to the file name before you submit.

* Write commands to use the classicmodels database and show its tables to verify that you’re in the right place.

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1. **Retrieve employee tuples and identify the number of employees** in San Francisco and New York.

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Explanation: 6 employees in San Francisco and 2 employees in New York.

1. **Retrieve order details** for orderNumber 10330, 10338, and 10194 and **identify** what **type of cardinality** this represents in the entity relationship model.

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Explanation: The cardinality type for this function would be (1: N) because one order can have multiple order details, but each order detail is associated with only one order.

**Delete records** from the payments table where the customer number equals 103.

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Explanation: Used code to describe payments for number 103. Deleted all records and demonstrated.

1. **Retrieve customer records** for sales representative Barry Jones and **identify** if the **relationships** are one-to-one or one-to-many**.**

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Explanation: Query shows multiple rows where the SALES\_REP Barry Jones is repeated, but each CUSTOMER is different. The relationship is (1:N) one-to-many. I utilized and attached 2 possible ways to bring up the same information.

1. **Retrieve records** for customers who reside in Massachusetts and **identify** **their sales rep and the relationship of entities**. Identify if these entities demonstrate one-to-one or many-to-many relationships.

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Explanation:

Julie Firrelli is associated with multiple customers from various companies. This relationship is (1:N) one-to-many.

Steve Paterson is also associated with multiple customer from different companies making this relationship (1:N) one-to-many as well.

In both cases the sales rep have many customers, but each customer is only associated with 1 sales rep.

1. **Add one customer record** with your last name using an INSERT statement. You may use the name of a celebrity or fictional character if you don’t use your own name.

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Explanation:

This screenshot shows the code to add myself as a customer and demonstrate is worked. I added the same thing, but more condensed below for better readability.

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1. **Reflection**
   1. **Define how cardinality is applied** to the databases you’ve been working with and why different numbers of records returned from the different offices.

Cardinality refers to the relationship between two tables or entities. It describes how the records are related between one table and another table. The 3 main types of cardinality are one-to-one (1:1), one-to-many (1:N), and many-to-many (N:N). In this database, cardinality is applied by having a one-to-one with customers having one sales rep as well as one-to-many for a sales rep having many customers. Different offices might return different records by the way the tables are built, employees have different employee numbers, or there could be variations between both. Some offices could possibly not have any associated employees which would lead to fewer records.

* 1. **Compare and contrast** the different **queries** you ran and how cardinality applies to them.

We utilized various queries where we could see them perform different things. For example, in step 3 we retrieved the customer records utilizing the employee number. On this query it showed the cardinality of one to many since only one employee is assigned to one employee number and as we saw that employee had many different customers. On the other hand in step 2 we just retrieved orders where no other information had to be confirmed. Hence being one-to-one cardinality.

* 1. **Describe two** of the crucial **benefits** **of cardinality** in this type of database.

Two crucial benefits of this cardinality are efficiency and accuracy. This cardinality-optimized database and when utilized can retrieve related data from multiple tables. This allows for queries to be executed faster and simpler. For example when retrieving customer records for sales rep Barry the (1:N) relationship seamlessly allowed the query to accurately and efficiently access relevant data. Cardinality is also accurate in keeping things organized. For example, in the classmodels database, the relationship between orders and orderdetails is one-to-many. This means each order can have multiple order details, but each order detail is associated with only one order. Keeping everything structured and accurate when retrieving data.